عنوان مقاله:

Flood frequency analysis for annual peak discharges records in an urban drainage basin

محل انتشار:

دومین کنفرانس بین المللی پژوهش در مهندسی، علوم و تکنولوژی (سال: 1394)

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نویسندگان:

ali khazaei - *Corresponding Author: Department of physical geography, Razi University, Kermanshah, Iran*

iraj jabbari - *Department of physical geography, Razi University, Kermanshah, Iran*

خلاصه مقاله:

In this study, amounts of peak discharge and frequency of floods in the urban watershed are investigated. A framework for flood frequency analysis is based on the Regional equations for estimating, 1, 2, 5, 10, 20, 25, 50, 100, 500, 1000 and 10000-year flood-peak discharges were calculated on unregulated streams in Kermanshah plain of Iran. Flood-frequency estimates determined for 4 stream flow-gaging stations in the study area. Special mathematical functions were considered aiming flow-frequency relation by statistical analysis of the series of recorded annual maximum flows and finding an appropriate distribution with use Minimum chi-squared tests. Values of explanatory variables used in the method were determined from digital spatial data sets by means of a geographic information system (GIS), which was determined by digitizing the area within basin boundaries manually delineated on topographic maps. The results shown 2-parameter gamma distribution and Gamble distribution were fit distribution on estimating flood-frequency characteristics

کلمات کلیدی:

Flood frequency analysis; Minimum chi-squared tests; GIS; 2-parameter gamma distribution; Gamble distribution